

Docket No. 240800US-2S DIV

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Norihisa ARAI

SERIAL NO: NEW APPLICATION

GAU:

FILED: HEREWITH

EXAMINER:

FOR: METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE INCLUDING PROCESS FOR IMPLANTING IMPURITIES INTO SUBSTRATE VIA MOS TRANSISTOR GATE ELECTRODE AND GATE INSULATION FILM

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references were submitted in prior application Serial No. 09/886,980 filed June 25, 2001, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

- ☐ Each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



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David A. Bilodeau

Registration No. 42,325

Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO. 240800US-2S DIV		SERIAL NO. New Application	
LIST OF REFERENCES CITED BY APPLICANT				APPLICANT Norihisa ARAI			
				FILING DATE Herewith		GROUP	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
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FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO		
	AO						
	AP						
	AQ						
	AR						
	AS						
	AT						
	AU						
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)							
	AV	T. UKEDA, et al., "HIGH RELIABILITY TRENCH ISOLATION TECHNOLOGY WITH ELEVATED FIELD OXIDE STRUCTURE FOR SUB-QUARTER MICRON CMOS DEVICES" Solid State Devices and Materials, Yokohama 1996, pgs. 260 - 262.					
	AW	F. ARAI, et al., "HIGH DENSITY (4.4 F <sup>2</sup> ) NAND FLASH TECHNOLOGY USING <u>SUPER-SHALLOW CHANNEL PROFILE</u> (SSCP) ENGINEERING", IEEE, 2000, pgs. 775 - 778.					
	AX	Seijiro FURUKAWA, "SEMICONDUCTOR DEVICE", Corona Co., Ltd. Pgs. 57 - 59.					
	AY	S. M Sea, Supervised Translated by: Takeishi, Nishi, Kayama, "ULTRA-LSI TECHNOLOGY", Soken Shuppan, pgs. 230 - 237.					
	AZ	An article supervised by Takuo Sugano and edited by Tetsuya Iizuka, "DESIGN OF CMOS ULTRA-LSI", Baifu-kan, pgs. 192 - 193.					
Examiner					Date Considered		
*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Form PTO 1449  
(Modified)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO.

240800US-2S DIV

SERIAL NO.

NEW APPLICATION

## LIST OF REFERENCES CITED BY APPLICANT

APPLICANT

Norihisa ARAI

FILING DATE

HEREWITH

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
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	AM						
	AN						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
AO		2000-0035711 w/corresponding Japanese application 2000-243979 and English Abstract	06/26/2000	Korea		X
AP		02-246227 w/English Abstract	10/02/1990	Japan		X
AQ						
AR						
AS						
AT						
AU						
AV						

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	
	AX	
	AY	
	AZ	<input type="checkbox"/> Additional References sheet(s) attached

Examiner

Date Considered

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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	5,670,404	09/23/97	DAI			
	AB	6,005,270	12/21/99	NOGUCHI			
	AC	6,049,113	04/11/00	SHIDA			
	AD	6,281,050	08/28/01	SAKAGAMI			
	AE	6,297,082	10/02/01	LIN ET AL.			
	AF	6,300,655	10/09/01	EMA ET AL.			
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	AO	6-268178	09/22/94	JAPAN W/ENGLISH ABSTRACT		XX
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

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